

MAKING PLANTS AND FLOWERS GROW INDOORS

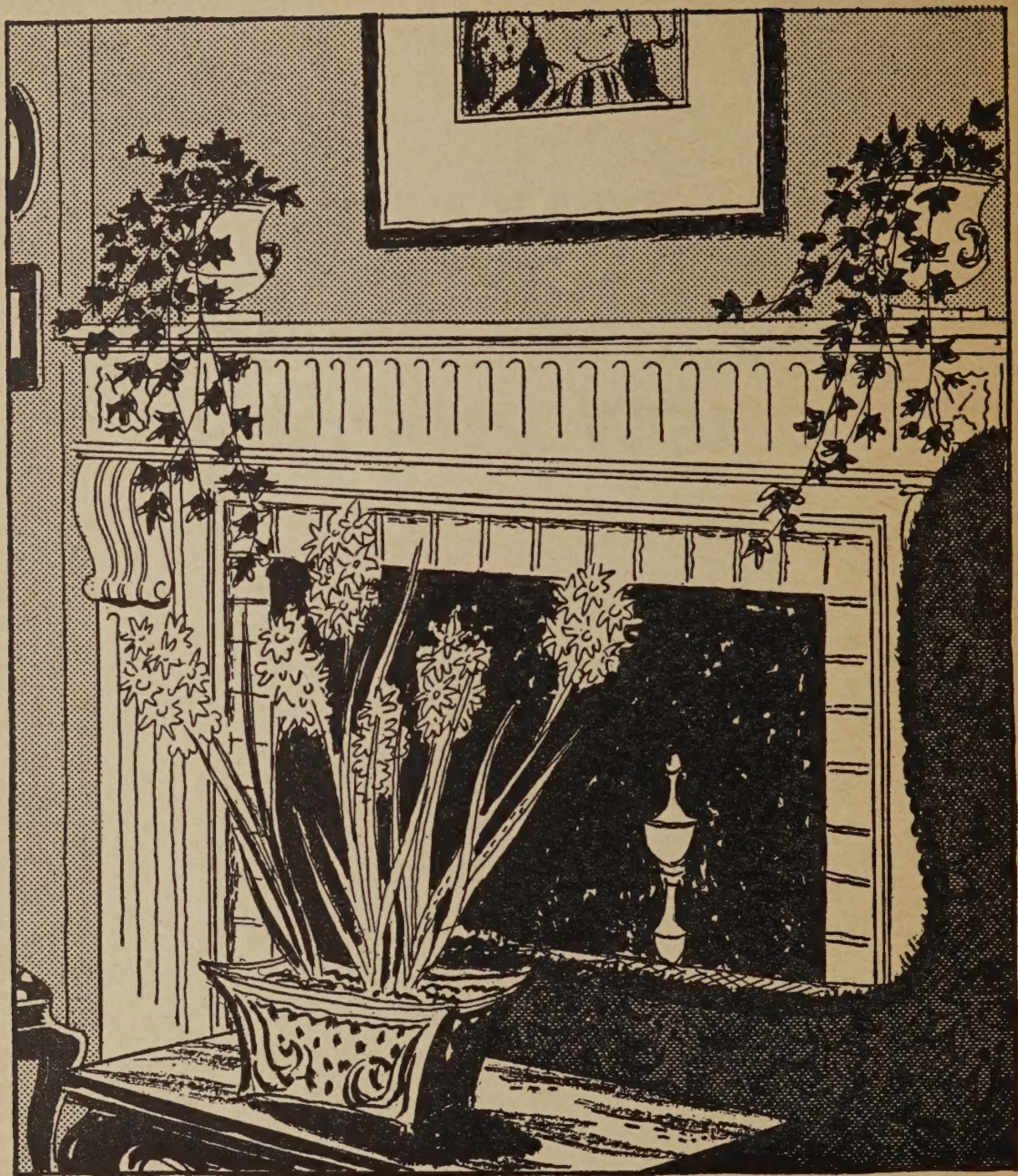
HOME SERVICE
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MAKING PLANTS AND FLOWERS GROW INDOORS

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SUGGESTIONS for choosing plants of various kinds to beautify the home . . . with directions for their care. A simple manual that will show the homemaker how to grow indoor plants—flowering or foliage—the year round

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Growing plants in a room are living pictures—the more charming because, as they grow, the pictures change. The graceful ivy and delicate flowering bulbs are but two of the many possibilities for bringing Nature's beauty indoors to be enjoyed constantly

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GROWING PLANTS INDOORS

THERE is something about any growing plant material that gives atmosphere to a room as nothing else can. The poorest room can not appear altogether forlorn and cheerless so long as it has flowers or growing plants in it, nor can the most beautifully furnished seem complete without them. Decorators have done their best for years to develop some sort of artificial plant or flower that would take the place of the real, but a healthy ten-cent fern still has more charm than a thousand dollars' worth of imitations.

No plant is by nature a house plant, yet a variety of plants can be grown indoors if given satisfactory growing conditions. Many of them bloom indoors, although it is easier to get good leaf growth than bloom.

The foliage plants are fully as valuable as those that flower, and some, like ferns, are even more valuable than most flowers. Their greenery harmonizes with any color scheme, and the shape and arrangement of foliage is often more adaptable for decorative purposes than flowers are. Then, too, foliage plants are lovely the year round.

Simple bowls, jars, and dishes which you may have at hand make excellent containers for most indoor plants. A green glass prune-juice bottle on window-sill, table, or desk is just the thing for English ivy, and the wandering-jew is especially attractive in a plain glazed ginger jar with sprays drooping over the edge of your mantel. The feathery green growth of a carrot or parsnip plant in water will show up to good advantage in a shallow dish with a slightly raised rim. Put branches of flowering shrubs and trees in a large deep pickle crock or vase; a sweet potato vine in a pottery container deep enough to hide the potato—such as an antique sugar bowl. Sansevieria looks well in a low, small ivory or yellow bowl on a table.

MATERIAL FOR GROWING IN WATER

THE easiest source of winter flowers and growing green for your home is material that can be grown in water. Many bulbs bloom well in water, and there is much other plant material that will bloom or make leaf growth in it with no care except adding water to replace what evaporates.

The most dependable bulbs for water growing are three sorts of narcissus: paper whites, *Soleil d'Or*, and the Chinese sacred lily or temple flower. Any of these blooms as well in water as in soil. If too immature to bloom, they make attractive leaf growth. The exotic creamy sacred lily requires rather more heat than the other two, but otherwise the care of all is the same.

Start bulbs as soon as you can get them in the stores. For continuous bloom start a few every two weeks, keeping your reserve supply in a paper sack hung in the cellar. Bulbs started in September ordinarily will not bloom before Thanksgiving; those started in January or later will bloom in a few weeks. The paper whites require less time to come into bloom than the other two.

Plant bulbs in a bowl or vegetable dish large enough to accommodate plenty of root growth. Fill it with water and pebbles, marbles, fiber, or something of the sort for the roots to grip, and set the bulbs so that the lower third will be covered with water. Keep the bowl in a cupboard, closet, or drawer until roots are an inch or more long. Afterward the bulbs may be kept in the living-room or on the office desk, but the cooler they are kept, the lovelier the flowers will be, and too much heat will cause flower buds to blast. In a dry atmosphere such as that of a schoolroom, bulbs should be in large pans, so that evaporation from the water surface will surround them with humid air. Roots must not be allowed to dry out.

Bulbs will not bloom indoors a second year, but in places south of the Ohio River they will grow in the garden after indoor blooming; farther north they might as well be discarded. Before destroying them it is a good idea to cut the leaves for use in bouquets of daffodils.

Lily-of-the-Valley

You can buy imported lily-of-the-valley pips from your florist and grow them at home very easily. All they need is water, but it is best to add sand or fiber so that the pips themselves will be held above the water surface. It is best to set the dish of pips in a dark warm place where there will be bottom heat—such a place as a shelf above the furnace—until root growth is well established and the tops are three inches high. After that they will make their entire growth and bloom beautifully even on a table in a darkish corner of the living-room. Pips lifted from the garden after January will grow in water indoors, but those bought in fall and early winter give the best results.

Flowers in Water from Garden Material

Sprays cut from nasturtiums and various other garden plants bloom for weeks indoors in water if kept free of plant lice; and those who like to experiment may try branches of almost every annual in bloom in the garden when frost threatens. Chrysanthemum buds cut just before killing frost will open indoors if kept in a darkish cool place in large pails or jars of water; the flowers will be a bit paler than in the garden.

Any time after January it is easy to have flowers indoors

by bringing in branches of fruit trees or spring-flowering shrubs. Cut branches set with flower buds (flower buds are always plumper than the leaf buds on the same tree or bush), and keep them in deep water in a jar large enough to prevent crowding. In a very dry room they will need sprinkling, but where the air is humid this is not necessary. The kitchen is always the best room for this forcing.

Forsythia is the most popular shrub for indoor forcing, with flowering currant, Japanese quince, and bridal wreath all popular. Sour cherry is the most easily forced of the fruit flowers, although plum, peach, apricot, and crab-apple are also satisfactory.

Decorative Growth from Seeds, Burls, and Vegetables

You can secure a decorative platter or pan of good green by sowing bird seed, lentils, or timothy seed over saturated peat moss. Results are best if the pan is set in a dark cool place for a week before being exposed to full light.

Many trees make knotty growths known as burls, and some of them grow well in water. The most easily secured are the redwood burls sold by florists. Simply place one of these in a shallow pan of water and keep it in the living-room; it will send up a miniature forest of ferny growth.

Vegetables that make thick root growth and will live over winter in the ground, such as carrots, parsnips, turnips, and horseradish, will make attractive growth indoors. Set the entire vegetable in a vase of water with just the lower third covered, or cut away all except the two inches next to the crown and place this, crown up, so that water covers just the lower part. Carrots make the most feathery growth, but all are interesting.

You can be sure of a good vine from a sweet potato set stem end up in a vase or bowl so that water covers the lower third, provided you start one in late summer. The sweet potatoes sold later are so well cured that they may be slow about starting growth. If you want a low bushy plant, keep the growing tips pinched back.

Vines for Growing in Water

Ground ivy and many other vines make good growth indoors in water, but the most satisfactory trio is wandering-jew, philodendron, and English ivy. All grow well in soil, but just as well in water. All will thrive in sunlight or darkness. The English ivy may be rooted in late summer, and should be kept in a pail of water on the porch while rooting; keep the other two in vases or jars from the moment they are removed from the old plant. While all are strong-growing and reliable, the common wandering-jew used in window and porch boxes is the most dependable of all.



Philodendron growing in a glass bowl, hung by cords or chains as illustrated, are attractive as window decorations. Other vines, such as wandering-jew and English ivy may be treated in the same manner. These plants are also graceful drooping over the ends of a bookcase or mantel as shown in frontispiece, or from a wall bracket. If you want a bushy plant for a desk or table, keep the vines pinched back

WINDOW BOXES AND BRACKETS

THE most satisfactory indoor window boxes are made of zinc, steel, or other metal painted to harmonize with the room furnishings. You may place them on the window sill or on brackets fastened under the sill.

In sunny windows keep boxes gay all winter with nasturtiums, petunias, ageratum, or other annuals started outdoors in summer. In light windows with little sun fill boxes with primroses—the showy obconicas if their leaves are not poisonous to the touch for you; or Chinese and baby primroses if you are susceptible to poisoning from the obconicas.

If you want plants which need less care and yet are as gay as flowers, fill your boxes with red, orange, or yellow-fruited plants. The Jerusalem cherry, also called Christmas cherry, is one of the easiest to secure. Ornamental peppers are often showier. Both plants are most satisfactory if bought from the florist in late fall. You can, however, grow them from seed planted in July, but you must remember that the seed comes up slowly. You can buy seed from a dealer or get it from a cherry (as described on page 26) or pepper removed from a plant. Popular varieties of pepper plants are Small Chili, Little Gem, Cherry, and Improved Celestial.

Palms, ferns, and other foliage plants do well in most windows. Small rubber plants and Japanese rubber plants, aspidistra, pandanus, peperomia, sansevieria, cacti, and succulents are all excellent. Coleus and begonias are more colorful, but somewhat more exacting.

Bracket Plants

If you do not want to devote your window sill to plants, you can add greatly to the attractiveness of your home by growing a plant or two in pots supported by a bracket fastened against the wall or attached to the window frame. The pots may be

chromium or some other metal, colorful peasant pottery in red, blue, green, yellow, orange, or any gay container that catches your fancy and fits into your decorative scheme.

Philodendron, wandering-jew, English ivy are the usual vines in bracket pots, but asparagus fern, grape ivy, strawberry geranium (also known as strawberry begonia, mother-of-thousands, old man's beard, and Aaron's beard), variegated periwinkle, and golden Ceylon creeper are all good. Periwinkle and Ceylon creeper should be grown in poor soil with little water and light if they are to be well marked with gold, as with good care the leaves soon become green.

One of the easiest and prettiest flowering plants for bracket pots is the oxalis whose drooping leaves suggest clover. Plant Bermuda Buttercup for yellow flowers or Grand Duchess for pink. Use three bulbs to a five-inch pot and cover with an inch of soil. Plant in September for winter bloom, setting pots in place on their brackets after a week in the dark.

Drainage, Soil, and Care

Soil in window boxes and bracket pots should be suitable for the material grown. Good garden loam, not too rich, is best for most plants. Cacti and succulents, however, need sharp sand, commonly known as torpedo or river sand.

In the bottom of each window box place a one-inch layer of drainage material—lumps of charcoal are excellent, but flower-pot pieces will do. You can fill the box with soil, and plant directly in it. Or you can grow your plants in pots, setting them on the layer of drainage material in the box, and filling in the spaces between pots with peat moss, fiber, or soil. This method is good for strong growing material, since the pots limit the root growth.

Plants in window boxes and bracket pots prefer a little water several times a day to too much at one time. (For further information on care of house plants, see pages 15 to 31.)

POTTED BULBS FOR INDOOR BLOOM

HYACINTH, narcissus, tulip, daffodil, and amaryllis bulbs offer the surest indoor bloom. You can force many other bulbs into bloom, but not so dependably nor so easily. If potted in September and October, these bulbs should give splendid bloom from Christmas to Easter. The secrets of success are simple: good drainage and cool moist darkness during rooting season.

Secure drainage by using an inch of cinders, pebbles, or broken flower pot in the bottom of each pot. The best way to provide cool moist darkness is to keep the bulbs in a cold frame or a pit dug in the garden while they are rooting. If you use a cold frame, pack leaves tightly between pots and heap the glass sash with leaves or straw. If you use a pit, line it with leaves, cover with boards and heap the boards with leaves or straw held in place with boards or brush. The leaves make it easy to get to the bulbs when the soil is hard-frozen. A pit one foot deep will accommodate one layer of pots. A pit two feet deep will accommodate two or three layers, each resting on the rims of the layer below.

Flower-pot sizes are measured in inches across the top. The best pots for bulbs are the shallow ones which florists call three-fourths sized pots, azalea pans, or fern pans. Bulbs are also graded in size. A first-size hyacinth needs a four-and-a-half-inch pot, a second-size needs a four-inch pot; three to five small hyacinths may be planted in a six-inch pot. A first-size narcissus or tulip usually takes a three-and-a-half-inch pot, although a variety whose bulbs run large, such as Sir Watkin, may need a five-inch pot. You may plant three tulip or narcissus bulbs in a four-and-a-half-inch pot or five in a six-inch pot.

Soak new pots in water a few hours before using them, to remove the saltpeter which might burn tender root growth.

Soil and Planting

Three parts good garden soil and one part torpedo sand make a good potting soil for bulbs. Fertilizer is not needed, although rotted cow manure, bone-meal, and other fertilizers may be used if desired. If you have no soil, you can secure good results by potting your bulbs in prepared fiber. Daffodil and hyacinth bulbs should be planted so that the tip shows above the surface; tulip bulbs should be barely covered.

Keep potted bulbs overnight in a tub of water to ensure saturation, then place them in cold frame or pit and let them alone for three or four months. Bring potted bulbs indoors any time after roots begin to grow through the hole in the bottom of the pot—rarely less than three months. Most gardeners like to provide for a succession of bloom by bringing in a few pots at a time at intervals of two weeks.

For the first days indoors keep potted bulbs in a cool, dark corner of the cellar, moving them to warmth and light gradually. Results will be best if you keep bulbs out of strong sunlight and in a temperature below 60°. Greater heat will hurry bloom, but too much heat will blast buds.

The best hyacinths for early bloom indoors are the Dutch prepared, but they are hard for the amateur to secure. The earliest-blooming variety easily secured is the white L'Innocence. Other hyacinths which force well are: Bismarck, Gertrude, Grand Maître, and Garibaldi. The earliest daffodils are the double Von Sion and Princeps. Other varieties that force well are: Sir Watkin, Golden Spur, Emperor, King Alfred, and Spring Glory. Tulips listed in catalogs as early tulips and double tulips bloom earliest in the house just as they do in the garden. The best include: Lady Boreel, Mon Tresor, Flamingo, Prince of Orange, General De Wet, and Murillo. The Darwin, Breeder, and Cottage tulips follow the early tulips. Not all varieties can be forced to bloom indoors,

but you can count on William Copeland, Bartigon, William Pitt, Princess Elizabeth, Bronze Queen, and Louis XIV.

After your bulbs finish blooming, set them in the basement and continue watering them. When growth begins outdoors, set them in the garden to bloom during future years. Few bulbs will bloom indoors a second year, but hyacinths and narcissus bulbs usually bloom well in the garden for years; tulips usually bloom at least after the second year.

Amaryllis Bulbs

The amaryllis requires no outdoor storage. Many of the bulbs offered today will not bloom under home conditions, but a first-class bulb should give excellent results with little care.

Plant an amaryllis bulb as soon as you get it; use a pot just an inch larger than it is, for amaryllis rarely blooms well unless root-bound. Cover the lower two-thirds of the thick part of the bulb, leaving the rest and the long neck exposed. Use the same soil as for other bulbs, with a handful of two-year rotted cow manure added. Give the bulb only enough water to prevent drying out until it begins to make top growth, which is usually in February. Keep it in a cool basement or pantry away from strong light.

When growth begins, give the bulb more water, and as soon as the flower stalk is three inches high move the bulb to full light, preferably to a sunny window. Keep it well watered and give it a cupful of weak liquid manure every ten days.

After flowering, plant amaryllis, pot and all, in a sunny part of the garden and keep it growing until fall. Then lay the potted bulb on its side in the basement and let it rest until November or December. Repot a bulb when it begins to crowd the pot, usually every three or four years.

Other Bulbs

Calla Lilies will bloom from January until spring if the bulbs are potted in September or October. The old-fashioned whites and Godfrey callas are best for home growing, but many indoor gardeners report equal success with the lovely yellow calla.

Select a six-inch pot for the average bulb and put cinders or pebbles in the bottom for drainage. A mixture of two parts garden loam, one part two-year rotted cow manure, and one part sharp sand makes a good potting soil. Plant bulb in soil with crown just above soil level. Set pot on a sunny window sill and water liberally when growth has started (yellow callas need less moisture than the white varieties). After strong growth starts, feed a half cup of weak liquid manure every ten days. Do not allow the night temperature to fall below 55°.

The same plant will bloom year after year if you let the foliage dry back at the beginning of June to give the root a complete rest during the summer. Repot in the fall.

Easter Lilies are familiar house plants; October is a good time for potting the bulbs. The earliest flowering variety is *Longiflorum Erabu*, but other good varieties are *Longiflorum formosum* and *Harrisi*.

Plant each bulb in a five- or six-inch pot, using bulb mixture described on page 12. Just cover the bulb, but leave 1½ inches space between soil level and top of pot—to be filled in as the stem grows. From then on, treat as you would other potted bulbs, following the directions on page 12.

Colchicums, or autumn crocus, produce lavender or blue blooms a month after the corms are planted in a low bowl of soil or water.

Ornithogalums are worth trying; especially *O. thyrsoides*, which produces a dense spike of fragrant, long-lasting, white lilylike flowers. According to many gardeners, it can be successfully treated like hyacinths (see page 11).

GENERAL RULES FOR CARE OF HOUSE PLANTS

GOOD luck with house plants depends on a dozen factors instead of just one. Your plants may thrive for years where one or two factors are unfavorable if all the others are favorable enough. Those that will not bloom may often be grown as foliage plants and be just as decorative.

Temperature

Most plants like an even temperature, but many of them will endure considerable changes of temperature. Such plants are the best to use if your house is hot during the daytime and near freezing after you bank your furnace for the night. There is no common house plant that will endure freezing, although some of them will endure temperatures below 40°.

Ferns, palms, rubber-plants, and most begonias like a day temperature of 60° to 65°. If you want to keep them in warmer rooms, you must have a higher degree of humidity (see page 17). The poinsettias are partial to a day temperature of 70°, and rarely bloom if kept much below that (see page 29).

Plants like a night temperature five to ten degrees lower than the daytime one. If a room gets very cold at night, you can, of course, cover plants just as you do a canary.

Chilling caused by sudden change of temperature is harder on plants than an even, low temperature. The common cause of chilling is draft from opening doors and from poorly fitted windows. Even if all other factors are favorable, few plants will survive drafts.

Light

House plants need light for bloom, but many will make leaf growth with comparatively little of it. They grow best,

of course, with light; but if you want the window for yourself, you can keep many in other parts of a room.

Many persons keep their plants in the garden all summer and expect them to make their year's growth then. All they ask during the winter is that they retain their summer's growth and look well. Light-loving varieties become sickly if deprived of light, but many varieties get along in any part of the average living-room. If there is one choice light spot in a room and several plants, let them have the place turn and turn about.

Too strong sunlight, especially if it alternates with much cloudy weather, is as hard on plants as too little sunlight.

Moisture

Plants need moisture both in the soil and the air. You supply them with moisture in the soil by watering them. The common symptom of overwatering and underwatering is the same—yellowing and falling leaves.

No one can tell you how much water to give plants. You must learn that by experience and observation. The following rules, however, will help you:

1. Never allow the soil to become dry enough to draw away from the sides of the pot, but never keep it soggy wet.
2. Give more water in warm rooms than in cool ones; more in rooms with dry air than in humid rooms; more on sunny than on cloudy days; more to growing plants than to resting; more to plants in small pots than to those in large ones; more to plants in porous pots than to those in glazed pots; more to those in pots with a hole in the bottom than to those in containers with no holes for drainage.

Another thing to keep in mind when you water plants is that it is possible to pour water around the plants until it comes out of the hole in the bottom of the pot, and still to have a mass of dry roots in the center of the pot. Therefore, the

work should be done thoroughly. Set the plant in a pail or tub with water to cover the pot; let the pot stand in the water until air bubbles quit rising. In some houses plants need such watering every two or three days, in other houses they need it but once in ten days.

Plants should be watered during the morning in cold weather, and with water of room temperature. Water should not stand in the saucer or jardinière under the pot unless the pot rests on legs, pebbles, or peat moss.

Humidity

“Humidity” means the amount of moisture in the air. The warmer the room, the higher humidity a plant needs. Humidity is high in the kitchen because of steam from cooking and dishwashing. In other rooms it may be increased by bowls or pans of water that have been set on the top of the radiators or stoves.

Plants respond quickly to moisture evaporated from the floor of a room, so if plants are badly wilted or in need of air moisture, freshen them by setting them on a wet concrete floor overnight. Or you can set them on a large zinc or metal tray filled with pebbles and water, with wet sand, or with water-saturated peat moss. Plants kept on such trays will often endure dry offices, schoolrooms, and living-rooms.

Daily syringing of the leaves with water of room temperature helps make up for lack of moisture in air. Syringe or spray on a rising temperature, usually in the morning.

Soil and Fertilizer

You can grow most house plants in ordinary garden soil, but a lighter soil is better. A popular mixture is equal parts of rotted sod, garden loam, two-year rotted cow manure, and

sand. The sand may be white sand or the river sand sold as torpedo sand.

Few foliage plants need any fertilizer except during the summer, but plants that bloom indoors, except the spring-blooming bulbs, need fertilizer while budding and blooming. The best fertilizer for them is liquid manure, prepared by letting water stand over rotted manure, bone-meal, or commercial fertilizer in a covered pail. Add water from time to time to replace what is removed. Liquid manure is the right strength for most plants when the color of weak tea. A half cupful every week or ten days is the proper amount for most plants. If you can not give your plants liquid manure, try one of the commercial fertilizers, following directions on the package.

Potting and Repotting

Garden plants should be potted in August and kept in a shady place outdoors until danger of wilting is past; then in a sunny spot for two or three weeks before taking them indoors.

House plants should be repotted in May. Remember to set the plants in fresh soil—see illustrations at right and explanation on next page—before plunging them in the garden. Whether the pots have bottom holes or not, be sure that they



have an inch to two inches of cinders, pebbles, or broken flower pots in the bottom for drainage. Soil should be filled in to within a quarter inch of the top, and should be firm but not tightly packed. Soil should be used for house plants just one year, and then returned to the garden.

To repot a plant first water well; then remove the plant from the pot in this way: Place your hand across the top of the pot with the thumb and forefinger on one side of the plant and the other fingers on the other side. Turn the plant upside down and knock the edge of the pot against the edge of a table. The entire mass of root and soil should come out in the hand. If the roots do not fill the soil, repot in a smaller pot. If they seem crowded, repot in a pot a size larger. Too large a pot is worse than too small a one. Send plants which are too large to handle easily to the florist for repotting.

Ventilation

Fresh air is necessary to most plants, but must be supplied without drafts or chilling. If you keep bedroom windows open at night and leave bedroom doors open during the daytime, your plants will probably get all the fresh air they need. If you have an open fireplace, that will take care of ventilation.

Gas in the air, whether coal gas or gas used for cooking and lighting, will harm most plants and kill many.

Pests and Diseases

Plant lice are especially fond of the sap of sickly plants and increase fast on them. The few lice that gather on healthy plants may be easily removed by washing with a soft sponge and water of room temperature. A weekly washing to remove dust is good for rubber-plants and others with thick, glossy

foliage. Scale insects are harder to wash off than lice, and may require the use of a soft brush. Both lice and scale insects may be killed by the use of commercial preparations. If the soil itself is infected, repot the plant in clean soil, first cleaning the pot with boiling water or a commercial solution.

Worms in the soil may interfere with drainage. If you pour a cupful of soapy water or a cupful of lime water, prepared by stirring a bit of lime in a cupful of water and letting it settle, around a plant, the worms will come to the surface, and you can then pick them off and destroy them.

Summer Care of House Plants

If you have no garden, keep your house plants on a sunny porch or in a sunny open window during the summer. If you have a garden, plant them pot and all, firming the soil against the sides of the pot. The soil surface and the top of the pot rim should be just even. Set your plants out after the weather is settled and bring them in before frost—as soon as nights begin to be cold. They can be left out later if covered at night.

Ferns, palms, begonias, and most foliage plants must be protected from sunlight, winds, drafts, and beating rains. A place along the north side of the house suits them. Christmas cactus, cacti, Jerusalem cherry, poinsettias, geraniums, and a few other house plants like more or less sun while in the garden. Afternoon sun is too hot for most house plants, and any sunlight is too strong for them during their first week in the garden; they should be moved out on a warm, cloudy day and kept shaded for a week.

Moisture-loving plants must be watered in the garden unless there is much rain. Cacti may need pebbles under the pot to keep them from becoming too wet.

THE CARE OF EASY-TO-GROW POTTED PLANTS AND FERNS

THE plants that will endure most for you in the way of dry atmosphere, sudden changes in temperature, gas, dust, and general neglect are foliage plants. If you give them perfect care, all will bloom for you, but even if you neglect them, they will live a long time and be more attractive than any artificial plant you can buy.

It is hard to select the plant that will survive most hardships, but aspidistra will stand so much that it is often called "iron plant." Even though you keep it in dark corners and hallways and forget to water it for weeks, it will make a good appearance if you wash its leaves.

Sansevieria and dracaena are only slightly less hardy. Sansevieria can be grown for months in a bowl without drainage, a fact which makes it a favorite for use on window-sills and polished tables which ordinary flower pots would mar. *Clivia miniata* makes good leaf growth under very unsatisfactory growing conditions, and blooms under poorer conditions than most other house plants. Its rich orange flowers grow in clusters and suggest small lilies in appearance.

Three Rubber-Plants

Rubber-plants are long-suffering, and their glossy leaves give them great decorative value. If you are tired of the common rubber-plant with its oval leaves, you will find the majestic rubber-plant, with its fiddle-shaped leaves, a pleasing variation and just as hardy. The so-called Japanese or Chinese rubber-plant, with its roundish, fleshy leaves and thick stem, is not a

true rubber-plant, but *Crassula arborescens*. It is as hardy as the true rubber-plants and more ornamental for some rooms.

If you have a corner where you want more graceful growth, try the umbrella plant, often called umbrella palm. It likes water and will grow in a jardinière with water standing in the bottom.

The other plants that will endure unfavorable conditions are desert plants used to hot days and cold nights. These are chiefly cacti and succulents, such as aloe and agave.

Ferns

Ferns need practically the same sort of care as other house plants. They like a little more leaf mold in the potting soil and a temperature a bit cooler than most of your other plants require (an even temperature of 60° suits them splendidly), and they do not care for direct winter sunlight, although such sorts as the Boston fern will tolerate it.

Start new ferns from the small green runners that develop around old ferns. Loosen the soil surface and peg the runners in it with a small wire hairpin; keep the surface moist. After the new plants root cut them free from the old plant and pot them separately. If you do not want new plants, let the runners alone until they die back of their own accord; if you cut them off, new ones will develop.

Ferns never bloom as most plants do, but most of them develop fruit dots on the under side or along the edges of the fronds. These dots often appear in the spring. They are usually brown and are always in a definite pattern, a different pattern for each sort of fern. You can tell them from insect pests by the fact that they never move and are arranged in a pattern. There is no use in trying to get rid of them, for they are a part of the natural growth of a fern and do not injure it.

Each fruit dot is filled with microscopic spores. If these are sowed on wood mold, leaf mold, or a mixture of peat moss and torpedo sand, and kept cool, moist, and shaded, they will make new plants. The best temperature for them is 60°. The required shade and moisture are best secured by turning a glass dish upside down over them to make a miniature greenhouse. The first growth that appears is utterly unlike a fern, suggesting a heart-shaped leaf no larger than a pinhead, but under favorable conditions fern fronds will appear later.

The best ferns for indoors are birdsnest, Boston, leather fern, brake fern, staghorn, and tender holly fern. Davallias and the splendid Mexican tree fern are worth trying.

Other Foliage Plants

Chinese evergreen prospers in hallways or room corners where other house plants may fail. It can be planted in peat moss kept wet, or in water. You may encourage the stalks to grow in interesting curves by placing them sideways in a bowl.

Among the palms, Arecas, Kentias, and Cocopalms are easiest to grow. They require little sun and often grow surprisingly well even in hot, dry temperatures; but they abhor drafts.

Silk oak (*Grevillea robusta*) has graceful foliage and is excellent for table decoration. It can be easily grown from seed started in February. Grow new plants every two years.

Two plant families which are supplying new house plants are the Aroids—to which the Jack-in-the-pulpit belongs—and the pineapple family (Bromeliads). These are not only able to survive dry conditions but have unique foliage as well. An easy-to-get Aroid is the *Nephtytis liberica*—arrowhead vine—which produces bright green leaves shaped like arrowheads. It is happiest when it has something to cling to. For an inexpensive but lovely house plant, cut off the rosette of foliage from the top of a pineapple fruit and insert it in moist sand.

FAVORITE FLOWERING HOUSE PLANTS

MOST flowering house plants require more care than foliage plants and ferns but the results are worth it.

Hardy Dwarf Asters For a charming display during the fall, pot some hardy dwarf asters in early September. Choose one Michaelmas daisy, one Bluewood aster, and two kinds of New England pompons; be sure to get young plants. Get a pot seven inches high and ten inches across. Cover the bottom with one-inch drainage—flower-pot pieces, charcoal, cinders or pebbles. Then fill the pot with average garden soil and set in the young plants. Do not use rich soil.

Chrysanthemums The reigning fall favorite is the potted chrysanthemum which you can coax with good care into blooming until Christmas. It flourishes best in a sunny south window in an unheated bedroom or sunporch. Keep your plant cool; otherwise it will become infested with plant lice.

After blooming period, transfer plant to a cool basement and water just enough to keep it alive. The new shoots that appear can be used for slips to start new plants. You can also start chrysanthemums by planting seeds outdoors or pinching off slips from the tops of growing stems in the spring—but the easiest way is to start plants from shoots in April or May.

Chrysanthemums may be grown all their lives as pot plants, planted pot and all in the garden during the summer, or as garden plants until August and then potted. Pot on a cloudy day in August and keep in the shade until danger of wilting is past. Afterwards, keep them outdoors in a sunny spot on the south side of house until frost. During uncertain weather in late fall, cover at night with canvas, or take indoors and set out again the next day.

Japanese Morning Glory This lovely vine is practically a newcomer to the house. It reaches a height of three feet and should be trained over wire frames. For indoor bloom sow seed in the garden in late July or early August and pot plants as soon as they are large enough to handle. Bring in before frost and keep in a sunny window. To stimulate the plant into producing its varicolored flowers, cut off some of the leaves.

Cineraria A late winter favorite is the cineraria of the bright pink and purple flowers which will keep blooming for weeks if you place it in a cool room, keep it out of direct sunlight, and give it plenty of water—on the soil, not the leaves.

Cut the plant back when it ceases to bloom and keep it watered so that it will send up a healthy new growth which can be used for slips to start new plants. Keep the new plants in the garden during the summer, in a shady spot on the north side of the house. In August, pot them in six-inch pots, using about three parts good garden soil and one part rotted cow manure. Bring indoors before frost. In the house, they need a temperature of about 45° at night, 55° during the day, and a fair amount of moisture in the air. After the flower buds appear, give plants a cupful of weak liquid manure occasionally.

To grow cineraria from seed, take a box two or three inches deep and place a layer of cinders in the bottom. Add soil of equal parts garden loam, rotted leaf mold, and torpedo sand. Press the surface level, scatter seed thinly over it, sprinkle a one-eighth inch layer of sand over the seed and set the box in pan of water to moisten soil thoroughly. Then place the box in the shade on north side of house.

Keep surface damp, but not wet. Seedlings will come up in about two weeks. When they get their first leaves, put them in pots one and a half inches across. Keep changing pots as the plants grow larger. In August, repot, following the same procedure as with slips.

Begonias Although the Christmas-blooming begonias, *Gloire de Lorraine* and *Melior*, are not so long-lasting as the everblooming types they produce showier flowers. Other lovely varieties are the beefsteak begonia which blooms from January to July and the star begonia which has sprays of rosy flowers. Most species prefer eastern windows and a slightly moist soil.

In the spring, as soon as danger from frost is past, plant your begonia, pot and all, in the garden. Place it in a shady, sheltered spot so that the plant will be protected from strong sunlight and drafts. Feed a cupful of weak liquid manure every ten days during June, July, and August. Lift and take indoors before cold weather (see indoor temperature, page 15).

Jerusalem Cherry A favorite for window boxes (see page 9), the Jerusalem cherry usually bears its red, orange, or yellow fruits around Christmas. In early spring, cut two or three inches from the tops of every stem and plunge the pot in a sunny part of the garden. It will flower and bear fruit all summer. It is easy to start new plants for indoor bloom from seed taken from one of its ripened cherries.



The Jerusalem cherry, an old-fashioned plant, is grown for its colorful, berry-like fruit. It thrives best in full sunlight. It should be protected from gas fumes, drafts, and drought. When winter fruiting season is over, stems are cut off as described above. Cuttings may be rooted to start new plants

Clivia Miniata Among the easy-to-grow flowering plants is one briefly discussed on page 21—the *Clivia miniata*, whose foliage of green ridged leaves is ornamental all year. Keep it in a light, though not necessarily sunny, window. It requires a temperature of not less than 40°. It is not necessary to feed the plant fertilizer the first year for plants are usually sold in enriched ground. For the second year, feed with weak liquid manure (see page 18).

The blooming period of the Clivia—about two months—varies somewhat in different parts of the country. After flowering, the plant requires a rest period, with little water and not too much light. It does not need repotting for several years; when you do repot it, do so soon after flowering, using a good potting mixture (page 17).

Geraniums To obtain the best results with this good old standby, do not grow in too rich a soil, or water too freely. In the spring, after all danger from frost is past, remove the plants from their pots and plant in the garden. Give them a place where they will have sunlight in the morning and shade during hot afternoons. To obtain new plants that will bloom in the house during the winter, take slips from the plants in late May. Root these in the garden and pot them in late summer, bringing them indoors before freezing weather sets in.

Gloxinias and Cyclamen These plants dislike water on their leaves. Gloxinias are so partial to a moisture-laden atmosphere that often the kitchen, with its steam from cooking and dishwashing, is the only room with enough humidity for them. Cyclamens are partial to light, cool windows with a temperature of about 50°.

Azaleas This winter favorite likes a cool, light window and rain-water; water or soil containing lime is usually fatal. During the summer, plant azaleas, pot and all, on the north side of the house and bring them indoors before frost.

Christmas cactus The budding and blooming season of this popular cactus is from November to February. During the budding period, there must be ample moisture in the air, and if necessary, keep the plant in the kitchen where it will benefit from the usual humidity. Protect plant against chilling. For good bloom, the house temperature should be above 60° day and night. Where the temperature is lower, give less water.

After blooming time, move the plant away from the light and give it just enough water to keep it from shriveling. After a month or six weeks of almost complete rest, increase the amount of water gradually. At the end of May, put the plant on a sunny porch or place in your sunniest window; or plunge it in a sunny spot in the garden. It may need a muslin cover for a week or so for protection against burning in the sunlight.

A Christmas cactus may need watering three or four times a week all summer. While in the garden, give it a cupful of weak liquid manure once a week. If your plant needs repotting, do it just before setting it out in the garden. Use heavy garden loam with one-fourth torpedo sand and do not use an overly large pot—otherwise the plant may not bloom. If no repotting is needed, scrape away the top soil and replace with fresh soil before setting plant outdoors:

Take the plant indoors as cold nights approach. Stop feeding fertilizer and give the plant just enough water so that the soil is always moist to the touch—never soggy. Set in a light window, preferably a south one and keep your plant out of drafts. With such care it should produce lovely blooms.

Christmas cacti can be grafted on tall-growing cacti to make tree-shaped plants, or on round cacti to make mounds of growth. Do the work at the end of the resting period. The easiest way is to slice the two surfaces to fit and tie them together with raffia or soft cord. If the edges do not grow together in a few weeks, take off another thin slice from each

surface and tie them together again. During this period keep plants a little drier than usual.

Start new plants in the spring by breaking off pieces of the old and sticking them into the pot besides old plant or in the garden. Lift with an old spoon after slip is rooted and plant in a small pot.

Poinsettias These flowers require more warmth than most plants, preferring a day temperature of 70° or above and a night temperature of not less than 63°. They like sunlight but do not expose them suddenly to it. They abhor drafts and need much water of room temperature—often twice a day—when blooming. The soil, however, should never be soggy wet.

To supply the necessary humidity in the air, syringing the plant each morning with water of room temperature helps. Or you might set a bowl of water beside the plant—or keep the plant on a pan filled with wet sphagnum moss or with pebbles and water; but never set the pot itself in water.

To get your plant to bloom again, give it a resting period of about six weeks—any time from December to August, indoors or out. Lay the pot on its side in a warm, dark place and let the plant dry back as much as it can without shriveling.

Prune the plant either before or after its resting period, cutting it to within six inches of the soil. The stem will branch where cut and each new branch should bloom. For new plants, root the cuttings between April and early August, in torpedo sand or garden soil. Each slip must have at least one bud below ground and one above ground.

After the rest period, repot plant in ordinary potting soil (page 18), in a pot a size larger; or scrape out the upper inch or two of soil and replace with new rich soil.

During the summer plant poinsettia, pot and all, in garden spot free from winds or keep on a porch or sunny window. Bring indoors at first hint of cold nights. As soon as the plant

has grown used to indoors, feed it a cupful of weak liquid manure weekly.

Astilbe japonica Astilbe roots usually can be secured from the florists about the first of November. They may be potted in any sandy loam and will bloom from 10 to 15 weeks after starting, depending on temperature, variety, and general care. Their chief requirement is water and more water. After the flower buds begin to show, many growers keep the pots standing in a saucer. The temperature should not fall below 50° at night and should be about 60° during the day for best results.

Marica More commonly known as Twelve Apostles, the irislike Marica Northiana produces white blooms variegated with violet in winter and spring. It often requires watering twice daily—but it will withstand extremes of temperature. For new plants, pot the plantlets which appear after the flowers die, or divide the roots in May. Provide good drainage and use good garden soil.

Abutilon More commonly known as flowering maple, abutilon has attractive maplelike leaves and large bell-shaped blooms in yellow, salmon, scarlet, or crimson. It thrives best in a sunny window, in rich sandy soil. If grown from seed like annuals and potted in fall, it will bear flowers all winter. Abutilon may also be started from cuttings taken in autumn. Pinch off the growing tips of young plants frequently to induce side growth.

Wax plant Possessing shiny green or variegated foliage and white and pink flowers, the trailing wax plant (*Hoya carnosa*) is longlived and ideal for bracket pots (see page 9). It flourishes in a sunny window, in an atmosphere that is not too dry. To start new plants, root the stem cuttings bearing two leaves each in a pot of sharp sand, keep in a sunny window, and water plentifully.

African violets do well in light windows without sun. Their gay blossoms with bright yellow centers lend a cheerful note to a north window which is usually limited to the foliage plants. African violets thrive with simple care. They dislike excessive heat, sudden changes of temperature, gas fumes, drafts



African violet This favorite produces deep blue, purple, or pink blooms almost continually. Although it is possible to grow it from seed, it is better to start with a growing plant and then propagate from leaves—even a single long-stemmed leaf will take root. It blooms best in a small pot which crowds its roots and it prefers much moisture in the air. If room is dry, place pot on a saucer of wet pebbles, sand, or peat moss. Once a week, soak pot in pail of water until air bubbles stop rising and give it a midweek drink by setting it in a saucer of water. Do not spray as this plant dislikes water on its leaves.

Shrimp plant The showy shrimp plant (*Beloperone guttata*) is a newcomer to indoor gardens and likes a sunny window. It produces tiny white flowers covered by curious overlapping rose-bronze bracts which hold their color for months. A sandy loam and medium moisture is best. Since it has a tendency to spread, prune occasionally, even in winter. You may start new plants in spring from slips cut below the joint and thrust in sharp sand.

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